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(54) Title: METHODS FOR DEFECT DETECTION AND PROCESS MONITORING BASED ON SEM IMAGES



(57) Abstract: A morphological operation is applied to an SEM image to obtain a idealized image, and the idealized image is used to detect a defect in a subject of the SEM image. The defect is detected by subtraction of the idealized image from the original image. Morphological operations are used also to entrance the visibility of defects or to check for irregularities in patterns. Other described methods comprise: growing a flow from seed points in the image, in order to define maps in which particles can be identified; checking for separation of objects in the image by growing flows from seed points located on the objects; segmenting the image into supposed identical objects and applying statistical methods to identify the defective ones.



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